



December 13, 1993

Mr. Mike Lichay
District Plant Manager
United Parcel Service
1700 West Park Drive
Westborough, MA 01581

RE: August 1993 Quarterly Groundwater Sampling
United Parcel Service Facility, Rutland, Vermont; VTDEC Site #91-1118

Dear Mr. Lichay:

Enclosed is the revised report on the August 17, 1993 groundwater sampling and installation of the new monitoring well on August 12, 1993 at the United Parcel Service Facility in Rutland.

Please call me with any questions.

Sincerely,

A handwritten signature in cursive script that reads "Kevin McGraw".

Kevin McGraw
Hydrogeologist

Encl.

c. E. Stanley Corneille, VTDEC

**REPORT ON THE
QUARTERLY GROUNDWATER
SAMPLING AND
ADDITIONAL SUBSURFACE INVESTIGATION**

AT

**UNITED PARCEL SERVICE FACILITY
RUTLAND, VT
VTDEC SITE #91-1118**

December, 1993

PREPARED FOR:

**UNITED PARCEL SERVICE
1700 WEST PARK DRIVE
WESTBOROUGH, MA 01581**

PREPARED BY:

**Griffin International Inc.
2B Dorset Lane
Williston, VT 05495
(802) 879-7708**

Griffin Project #3924187

TABLE OF CONTENTS

<u>SECTION</u>	<u>Page</u>
I. INTRODUCTION	1
II. SUMMARY	1
III. PRODUCT MEASUREMENTS	1
IV. GROUNDWATER SAMPLING	1
V. GROUNDWATER FLOW DIRECTION	2
VI. MONITORING WELL INSTALLATION	2
VII. CONCLUSIONS	3
VIII. RECOMMENDATIONS	3
APPENDIX A:	Site Location Map Site Map showing Groundwater Contours
APPENDIX B:	Water Level and Product Thickness Data
APPENDIX C:	Bailing Record Summary
APPENDIX D:	Groundwater Quality Summary
APPENDIX E.	Laboratory Results
APPENDIX F.	Drilling Log

I. Introduction

This report summarizes the results of the August 1993 groundwater sampling and analysis at the United Parcel Service Facility in Rutland, Vermont (See Site Location Map in Appendix A). This report also summarizes the installation and analysis of the new monitoring well (MW10) which was installed at the request of the Vermont Department of Environmental Conservation (VTDEC). Quarterly groundwater sampling is being conducted in response to the presence of residual subsurface petroleum contamination in the vicinity of a former gasoline underground storage tank (UST) which was removed in September 1991.

II. Summary

Results from the August 17 site visit indicate that residual petroleum contamination remains in the vicinity of the former gasoline UST. Free phase product (gasoline) was detected in three monitoring wells, where it has previously been documented, but was not identified in any additional monitoring wells. Analysis of the water sample from the new down gradient monitoring well (MW10) shows concentrations of dissolved petroleum compounds benzene and xylenes above the Vermont Drinking Water Standards. No signs of petroleum contamination were detected along Moon Brook. Griffin recommends continued weekly bailing of the on-site monitoring wells to assure the prompt removal of any free phase product which accumulates. Groundwater samples should be collected again in November 1993. Details of the August 17 monitoring and the MW10 installation are described below.

III. Product Measurements

On August 17, 1993, free phase product was detected in monitoring wells MW4, MW5, and MW6. Product thicknesses were 0.25 feet in MW4 and MW6 and 2 feet in MW5. Product thicknesses are tabulated in Appendix B. Free phase product was not detected in any other monitoring wells and appears to remain in the same area as previously documented.

Weekly bailing of MW4, MW5, and MW6 continues to be performed by UPS personnel. Product thicknesses and volumes bailed are recorded on the Bailing Record Summary in Appendix C.

IV. Groundwater Sampling

On August 17, 1993, groundwater samples were collected from monitoring wells MW8, MW9, and MW10. Groundwater samples were not collected from MW4, MW5, or MW6 due to the presence of free phase product. MW7 was sampled on August 18, 1993. The samples were analyzed according to EPA Method 602 which tests for benzene, toluene, ethylbenzene, and xylenes (BTEX) and MTBE (methyl tertiary butyl ether, a gasoline additive). Results of the analyses are tabulated in Appendix D. Supporting laboratory report forms are included in Appendix E.

Analysis of the groundwater sample from MW7 showed no detectable contaminants. Contaminant concentrations in MW7 have decreased from 2,493 parts per billion (ppb) of BTEX in March 1992 to three consecutive quarters of non detectable or very low contaminant levels. This appears to indicate that groundwater quality in the vicinity of MW7 has improved. This suggests that residual, dissolved phase groundwater contamination is not migrating to this monitoring well from the source area at concentrations above the drinking water standards.

Analysis of the groundwater sample from MW8 detected no petroleum related compounds, indicating that residual petroleum contamination has not migrated to the vicinity of this well.

Analysis of the groundwater sample from MW10 indicates that some contamination has migrated down gradient to this well. Analysis showed total BTEX + MTBE contaminant levels at 2,721 ppb with benzene and xylenes detected above the Vermont Drinking Water Standards.

Based on the groundwater sampling data, it appears that dissolved phase groundwater contamination is not migrating rapidly away from the area of the former underground storage tank.

All samples were collected according to Griffin's Groundwater Sampling Protocol which complies with industry and state standards. Trip blank and equipment blank samples indicate that adequate quality assurance and control was maintained during sample collection and analyses. All samples were analyzed within the EPA maximum recommended holding times.

V. Groundwater Flow Direction

Prior to collecting groundwater samples, water level measurements were collected from all seven on-site monitoring wells. These measurements were used to develop the Groundwater Contour Map in Appendix A. Well MW7 was not used to calculate flow direction, because rain water was found to have entered the well. A new cap was installed on the well. Groundwater measurements are tabulated in Appendix B. The water level data indicate that the groundwater flow direction in the area of the former UST may range from southwesterly to northwesterly. Topography at the site suggests a northwesterly flow direction.

VI. Monitoring Well Installation

At the request of the VTDEC, an additional monitoring well (MW10) was installed at the site. The well is shown on the site map in Appendix A. The well was installed by Technical Drilling Services of Clinton, Massachusetts under the direct supervision of a Griffin geologist. The well was installed using a truck mounted hollow stem auger drill.

Split-spoon samples were taken during the boring at five foot intervals and screened for volatile organic compounds (VOCs) with a photo ionization detector (PID). VOC concentrations were 7.2 ppm from grade to two feet, 2 parts per million (ppm) from four to six feet, and 22 ppm from nine to eleven feet. A slight petroleum odor was noticed from nine to eleven feet.

The MW10 boring intersected two feet of coarse to fine sand and gravel underlain by silt and fine sand to a depth of nine feet. At nine feet, silty clay was intercepted. The hole was bored 12 feet below grade. The water table in the boring was approximately six feet below grade.

The well is constructed of two inch diameter, 0.010" slot, PVC well screen and attached solid PVC riser. The annulus between the borehole and the screened section of the well is filled with gravel pack to filter fine sediments from the groundwater entering the well. Approximately one foot above the screened section of the well, the annulus is filled with a bentonite clay seal to prevent surface water from infiltrating into the borehole. The well is protected at the surface with a locking well cap, flush mounted steel well head protective casing, and a bolt down cover. The well head protection casing is set in cement. Well construction details are shown on the well log in Appendix F.

VII. Conclusions

Based on this information, Griffin has reached the following conclusions:

- 1) Residual, free phase petroleum contamination remains in the vicinity of MW4, MW5, and MW6 where it has previously been documented. Free phase product was not detected in any additional monitoring wells and does not appear to be spreading further.
- 2) Concentrations of dissolved phase petroleum contamination were not detected in MW7, MW8, or MW9.
- 3) Concentrations of benzene and xylenes are present in MW10 and may have migrated down gradient from the location of the former UST.

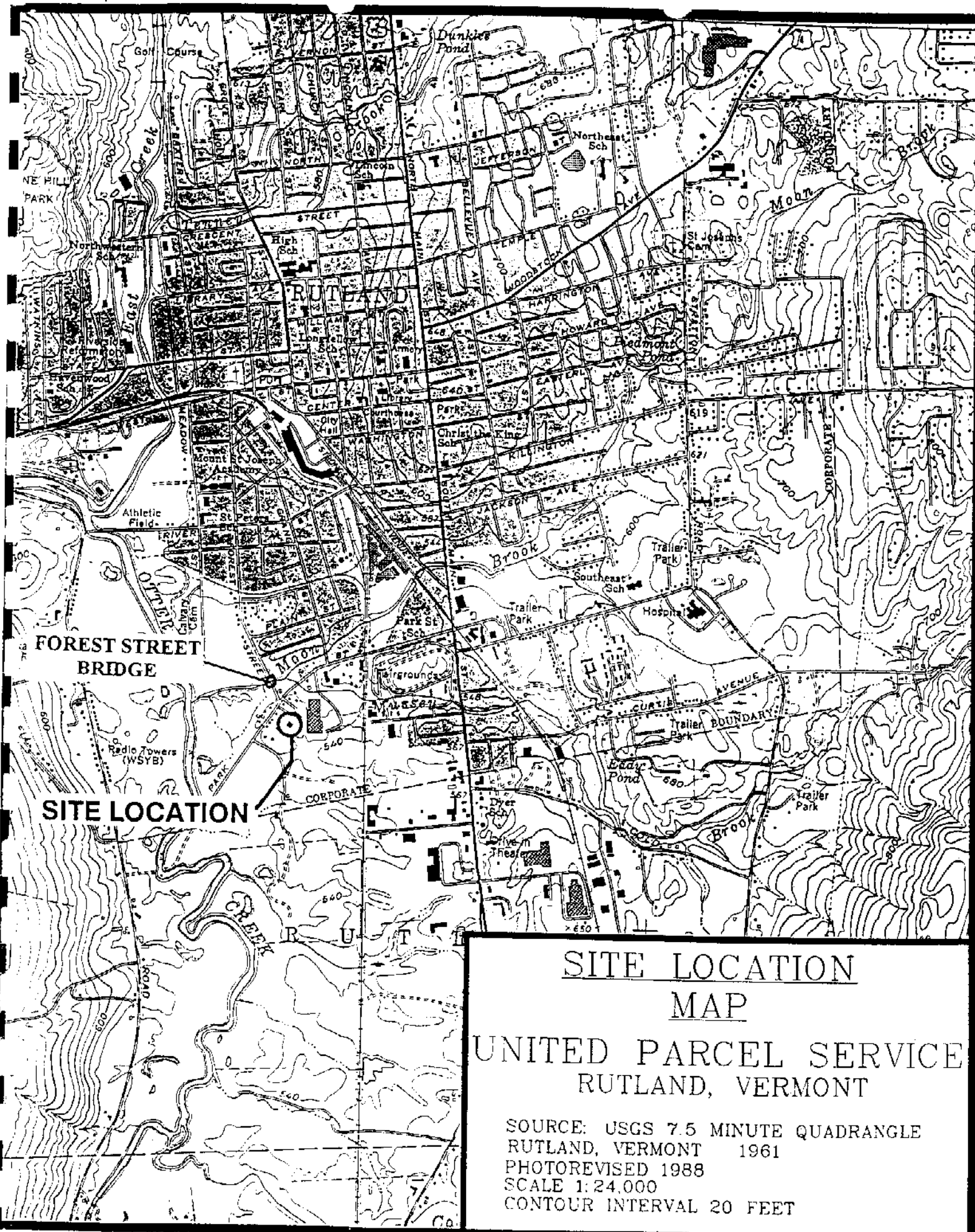
VIII. Recommendations

Based on the information presented, Griffin recommends the following:

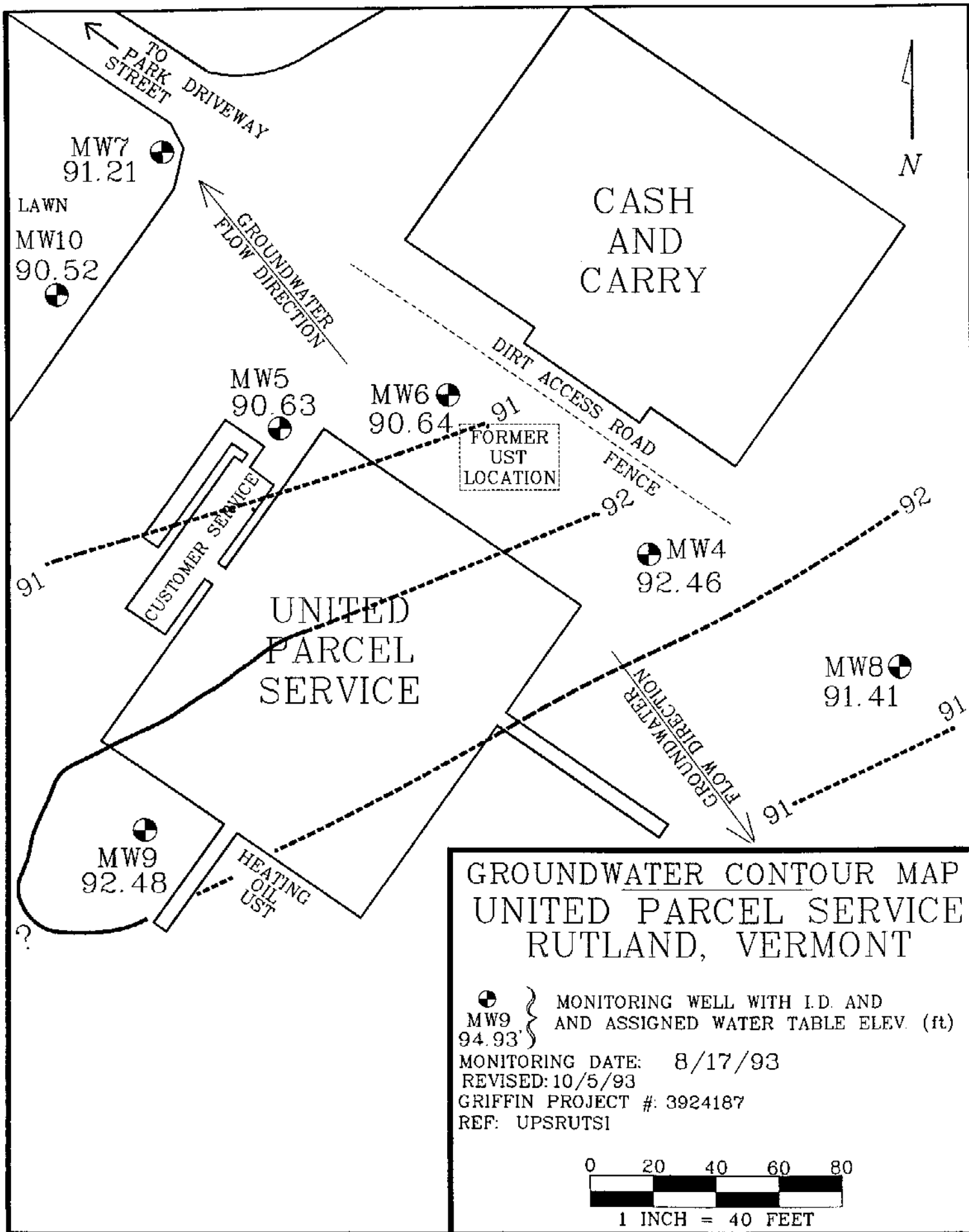
- 1) Wells MW4, MW5, and MW6 should be checked for the presence of free product on a weekly basis and bailed if more than 1/8 inch of product is detected.
- 2) All monitoring wells not containing free phase product, except MW9 which is considered to be outside of the area of contamination, should be sampled again in November 1993. Groundwater samples should be analyzed according to EPA Method 602.

APPENDIX A:

**Site Location Map
Site Map showing Groundwater Contours**



SITE LOCATION
MAP
UNITED PARCEL SERVICE
RUTLAND, VERMONT
SOURCE: USGS 7.5 MINUTE QUADRANGLE
RUTLAND, VERMONT 1961
PHOTOREVISED 1988
SCALE 1:24,000
CONTOUR INTERVAL 20 FEET



APPENDIX B:

Water Level and Product Thickness Data

**Liquid Level Monitoring Data
United Parcel Service
Rutland, Vermont**

Monitoring Date: 8/17/93

[illegible]

All Values Reported in feet
Elevations are based on Arbitrary Datum

APPENDIX C:
Bailing Record Summary

**Bailing Record Summary
Monitoring Well 4
United Parcel Service
Rutland, Vermont**

Date	Initial Product Thickness (Inches)	Amount of Product Recovered		Final Product Thickness (Inches)
		(cups)	(gallons)	
8/11/92	0.0	0.0	0.0	0.0
8/12/92	0.0	0.0	0.0	0.0
8/13/92	0.0	0.0	0.0	0.0
8/14/92	0.0	0.0	0.0	0.0
8/17/92	0.0	0.0	0.0	0.0
8/18/92	0.0	0.0	0.0	0.0
8/19/92	0.0	0.0	0.0	0.0
8/20/92	0.0	0.0	0.0	0.0
8/21/92	0.0	0.0	0.0	0.0
8/24/92	0.0	0.0	0.0	0.0
8/25/92	0.0	0.0	0.0	0.0
8/26/92	0.0	0.0	0.0	0.0
8/27/92	0.0	0.0	0.0	0.0
8/28/92	0.0	0.0	0.0	0.0
9/30/92	3.2	-	-	3.2
1/6/93	0.12	-	-	0.12
4/7/93	0.36	-	-	0.36
4/20/93	n/a	n/a	n/a	n/a
5/3/93	0.5	0.0	0.0	0.5
5/13/93	0.5	0	0	0.5
5/18/93	0	0	0	0
5/25/93	0	0	0	0
6/10/93	0	0	0	0
8/30/93	0	0	0	0
7/20/93	0	0	0	0
8/3/93	0	0	0	0
8/13/93	0	0	0	0
9/3/93	0	0	0	0

**Bailing Record Summary
Monitoring Well 5
United Parcel Service
Rutland, Vermont**

Date	Initial Product Thickness (Inches)	Amount of Product Recovered		Final Product Thickness (inches)
		(cups)	(gallons)	
4/14/92	0.5		0.0	1/2"
5/5/92	0.125		0.0	1/8"
6/8/92	-		-	-
6/13/92	0.125		0.0	1/8"
6/16/92	-	0.67	0.04	-
6/27/92	0.0		0.0	0
7/2/92	0.0		0.0	0
8/3/92	0.0		0.0	0.0
8/4/92	0.0		0.0	0.0
8/5/92	0.0		0.0	0.0
8/6/92	0.0		0.0	0.0
8/7/92	0.0		0.0	0.0
8/10/92	0.0		0.0	0.0
8/11/92	0.125		0.0	0.125
8/12/92	0.125		0.0	0.125
8/13/92	0.125		0.0	0.125
8/14/92	0.125		0.0	0.125
8/17/92	0.125		0.0	0.125
8/18/92	0.125		0.0	0.125
8/19/92	0.125		0.0	0.125
8/20/92	0.125		0.0	0.125
8/21/92	0.125		0.0	0.125
8/24/92	0.125		0.0	0.125
8/25/92	0.125		0.0	0.125
8/26/92	0.125		0.0	0.125
8/27/92	0.125		0.0	0.125
8/28/92	0.125		0.0	0.125
9/30/92	4.80		-	4.80
1/6/93	12.40		-	12.40
4/7/93	21.20	-	-	21.20
4/20/93	12.00		0.31	1.00
5/3/93	2.00	1.0	0.06	0.50
5/13/93	2.00	1.0	0.06	1.00
5/18/93	3.00	3.0	0.19	1.00
5/25/93	2.00	1.0	0.06	1.00
6/10/93	2.00	1.0	0.06	1.00
6/30/93	N/A			
7/20/93	4.00	2.5	0.16	0.50
8/3/93	3.00	1.0	0.06	0.50
8/13/93	3.50	1.0	0.06	0.50
9/3/93	20.00	12.0	0.75	20.00

**Bailing Record Summary
Monitoring Well 6
United Parcel Service
Rutland, Vermont**

Date	Initial Product Thickness (Inches)	Amount of Product Recovered		Final Product Thickness (inches)
		(cups)	(gallons)	
6/5/92	3.00	3	0.2	0.00
6/8/92	1.50	1	0.06	0.00
6/13/92	0.50	0.125	0.008	0.00
6/16/92	-	1.5	0.1	-
6/27/92	0.00		0.0	0.00
7/2/92	0.50	0.25	0.016	0.00
8/3/92	0.13		0.0	0.13
8/4/92	0.13		0.0	0.13
8/5/92	0.13		0.0	0.13
8/6/92	0.13		0.0	0.13
8/7/92	0.13		0.0	0.13
8/10/92	0.13		0.0	0.13
8/11/92	0.13		0.0	0.13
8/12/92	0.13		0.0	0.13
8/13/92	0.13		0.0	0.13
8/14/92	0.13		0.0	0.13
8/17/92	0.13		0.0	0.13
8/18/92	0.13		0.0	0.13
8/19/92	0.13		0.0	0.13
8/20/92	0.13		0.0	0.13
8/21/92	0.50		0.0	0.50
8/24/92	0.50		0.0	0.50
8/25/92	0.50		0.0	0.50
8/26/92	0.50		0.0	0.50
8/27/92	0.25		0.0	0.25
8/28/92	0.25		0.0	0.25
9/30/92	2.20		-	2.20
1/6/93	0.00		-	0.00
4/7/93	6.70	-	-	6.70
4/20/93	9.00		0.31	0.50
5/3/93	0.50	0	0.0	0.50
5/13/93	0.50	0.5	0.03	0.50
5/18/93	1.50	0.25	0.02	0.50
5/25/93	1.00	0.25	0.02	0.50
6/10/93	1.00	0.5	0.03	0.50
6/30/93	1.50	0.75	0.05	0.00
7/20/93	1.00	1.5	0.09	0.50
8/3/93	4.00	1.5	0.09	0.50
8/13/93	3.75	1	0.06	0.50
9/3/93	0.13	0	0.00	0.13

APPENDIX D:
Groundwater Quality Summary

**Groundwater Quality Summary
United Parcel Service
Rutland, Vermont**

Results in ug/l

Monitoring Well 4

PARAMETER	Date of Sample Collection						Vermont Drinking Water Standards
	3/2/92	6/16/92	9/30/92	1/6/93	4/7/93	8/17/93	
Benzene	12,100.	0.08' FP	0.27' FP	0.01' FP	0.01' FP	.25' FP	5.0*
Chlorobenzene	ND						100**
1,2-DCB	ND						-
1,3-DCB	ND						-
1,4-DCB	ND						-
Ethylbenzene	2,430.						680**
Toluene	29,200.						2,420**
Xylenes	13,300.						400**
Total BTEX	57,030.						-
MTBE	ND	∇	∇	∇	∇	∇	40**
BTEX + MTBE	67,030.						-

Monitoring Well 5

PARAMETER	Date of Sample Collection						Vermont Drinking Water Standards
	3/2/92	6/16/92	9/30/92	1/6/93	4/7/93	8/12/93	
Benzene	3.40' FP	0.04' FP	0.40' FP	1.03' FP	1.77' FP	2.0' FP	5.0*
Chlorobenzene							100**
1,2-DCB							-
1,3-DCB							-
1,4-DCB							-
Ethylbenzene							680**
Toluene							2,420**
Xylenes							400**
Total BTEX							-
MTBE	∇	∇	∇	∇	∇	∇	40**
BTEX + MTBE							-

Monitoring Well 6

PARAMETER	Date of Sample Collection						Vermont Drinking Water Standards
	3/2/92	6/16/92	9/30/92	1/6/93	4/7/93	8/17/93	
Benzene	1.78' FP	0.04' FP	0.18' FP	19,300.	0.56' FP	0.25' FP	5.0*
Chlorobenzene				ND			100**
1,2-DCB				ND			-
1,3-DCB				ND			-
1,4-DCB				ND			-
Ethylbenzene				1,830.			680**
Toluene				26,800.			2,420**
Xylenes				10,600.			400**
Total BTEX				58,530.			-
MTBE	∇	∇	∇	4,170.	∇	∇	40**
BTEX + MTBE				62,700.			-

1.03' FP - Amount of Free Product detected in well.

ND - None Detected

TBQ - Trace Below Quantitation Limits

* - Maximum Contaminant Level

N/A - Not Available

** - Vermont Health Advisory Level

**Groundwater Quality Summary
United Parcel Service
Rutland, Vermont**

Results in ug/l

Monitoring Well 7

PARAMETER	Date of Sample Collection						Vermont Drinking Water Standards
	3/2/92	6/16/92	9/30/92	1/6/93	4/7/93	8/17/93	
Benzene	1,030.	98.1	N/A	ND	ND	ND	5.0*
Chlorobenzene	ND	ND	N/A	ND	ND	ND	100**
1,2-DCB	ND	ND	N/A	ND	ND	ND	-
1,3-DCB	ND	ND	N/A	ND	ND	ND	-
1,4-DCB	ND	ND	N/A	ND	ND	ND	-
Ethylbenzene	983.	77.8	N/A	ND	2.7	ND	680**
Toluene	97.	13.3	N/A	ND	15.3	ND	2,420**
Xylenes	383.	34.3	N/A	ND	9.1	ND	400**
Total BTEX	2,493.	223.6	N/A	ND	27.1	ND	-
MTBE	ND	ND	N/A	ND	ND	ND	40**
BTEX + MTBE	2,493.	223.6	N/A	ND	27.1	ND	-

Monitoring Well 8

PARAMETER	Date of Sample Collection						Vermont Drinking Water Standards
	3/2/92	6/16/92	9/30/92	1/6/93	4/7/93	8/18/93	
Benzene	41.0	ND	ND	ND	ND	ND	5.0*
Chlorobenzene	ND	ND	ND	ND	ND	ND	100**
1,2-DCB	ND	ND	ND	ND	ND	ND	-
1,3-DCB	ND	ND	ND	ND	ND	ND	-
1,4-DCB	ND	ND	ND	ND	ND	ND	-
Ethylbenzene	3.9	ND	ND	ND	ND	ND	680**
Toluene	14.2	ND	ND	ND	ND	ND	2,420**
Xylenes	23.3	ND	ND	ND	ND	ND	400**
Total BTEX	82.4	ND	ND	ND	ND	ND	-
MTBE	ND	ND	ND	ND	ND	ND	40**
BTEX + MTBE	82.4	ND	ND	ND	ND	ND	-

Monitoring Well 9

PARAMETER	Date of Sample Collection	
	3/2/92	8/17/93
Benzene	ND	ND
Chlorobenzene	ND	ND
1,2-DCB	ND	ND
1,3-DCB	ND	ND
1,4-DCB	ND	ND
Ethylbenzene	ND	ND
Toluene	ND	ND
Xylenes	ND	ND
Total BTEX	ND	ND
MTBE	ND	ND
BTEX + MTBE	ND	ND

1.03' FP - Amount of Free Product detected in well.

ND - None Detected

TBQ - Trace Below Quantitation Limits

* - Maximum Contaminant Level

N/A - Not Available

** - Vermont Health Advisory Level

**Groundwater Quality Summary
United Parcel Service
Rutland, Vermont**

Results in ug/l

Monitoring Well 10

PARAMETER	Date of Sample Collection		Vermont Drinking Water Standards
		8/17/93	
Benzene		26.4	5.0*
Chlorobenzene		ND	100**
1,2-DCB		ND	-
1,3-DCB		ND	-
1,4-DCB		ND	-
Ethylbenzene		299	680**
Toluene		246	2,420**
Xylenes		2,150	400**
Total BTEX		2,721	-
MTBE		ND	40**
BTEX + MTBE		2,721	-

TBQ - Trace Below Quantitation Limits

ND - None Detected

N/A - Not Available

* - Maximum Contaminant Level

** - Vermont Health Advisory Level

APPENDIX E.

Laboratory Results



ENDYNE, INC.

RECEIVED SEP 2 1993
Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

REPORT OF LABORATORY ANALYSIS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17-18, 1993

PROJECT CODE: GIUP1142
REF.#: 50,189 - 50,194

Enclosed please find the results of the analyses performed for the samples referenced on the attached chain of custody. Chain of custody indicated samples were preserved with HCl.

All samples were prepared and analyzed by requirements outlined in the referenced method and within the specified holding times. All instrumentation was calibrated with the appropriate frequency and verified by the requirements outlined in the referenced method. Blank contamination was not observed at levels affecting the analytical results.

Analytical method precision and accuracy was monitored by laboratory control standards which included matrix spike, duplicate and quality control analyses. These standards were determined to be within established laboratory method acceptance limits.

Individual sample performance was monitored by the addition of surrogate analytes to each sample. All surrogate recovery data was determined to be within laboratory QA/QC guidelines unless otherwise noted.

Reviewed by,

Harry B. Locker, Ph.D.
Laboratory Director

enclosures



ENDYNE, INC.

RECEIVED SEP 2 1993
Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 18, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,194
STATION: MW 7
TIME SAMPLED: 10:45
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 5

NOTES:

1 None detected



ENDYNE, INC.

RECEIVED SEP 2 1993

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,190
STATION: MW 8
TIME SAMPLED: 10:20
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 10

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,191
STATION: MW 9
TIME SAMPLED: 10:35
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 97%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



ENDYNE, INC.

Laboratory Services

32 James Brown Drive
Williston, Vermont 05495
(802) 879-4333
FAX 879-7103

LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,192
STATION: MW 10
TIME SAMPLED: 10:55
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)¹</u>	<u>Concentration (ug/L)</u>
Benzene	20	26.4
Chlorobenzene	20	ND ²
1,2-Dichlorobenzene	20	ND
1,3-Dichlorobenzene	20	ND
1,4-Dichlorobenzene	20	ND
Ethylbenzene	20	299.
Toluene	20	246.
Xylenes	20	2,150.
MTBE	200	ND

Bromobenzene Surrogate Recovery: 86%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 24

NOTES:

- 1 Detection limit raised due to high levels of contaminants. Sample run at 5% dilution.
- 2 None detected



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Laboratory Services

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EPA METHOD 602 LABORATORY REPORT

MATRIX SPIKE AND DUPLICATE LABORATORY CONTROL DATA

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,190
STATION: MW 8
TIME SAMPLED: 10:20
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Sample(ug/L)</u>	<u>Spike(ug/L)</u>	<u>Dup1(ug/L)</u>	<u>Dup2(ug/L)</u>	<u>Avg % Rec</u>
Benzene	ND ¹	10	11.0	12.0	115%
Toluene	ND	10	11.3	12.3	118%
Ethylbenzene	ND	10	11.2	12.1	117%
Xylenes	ND	30	33.9	36.5	117%

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 28, 1993

PROJECT CODE: GIUP1142
REF.#: 50,189
STATION: Trip Blank
TIME SAMPLED: 7:20
SAMPLER: B. Schuyler

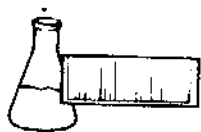
<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	ND
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 96%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 0

NOTES:

1 None detected



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LABORATORY REPORT

EPA METHOD 602 -- PURGEABLE AROMATICS

CLIENT: Griffin International
PROJECT NAME: UPS Rutland
REPORT DATE: August 31, 1993
DATE SAMPLED: August 17, 1993
DATE RECEIVED: August 18, 1993
ANALYSIS DATE: August 30, 1993

PROJECT CODE: GIUP1142
REF.#: 50,193
STATION: Equip. Blank
TIME SAMPLED: 11:25
SAMPLER: B. Schuyler

<u>Parameter</u>	<u>Detection Limit (ug/L)</u>	<u>Concentration (ug/L)</u>
Benzene	1	ND ¹
Chlorobenzene	1	ND
1,2-Dichlorobenzene	1	ND
1,3-Dichlorobenzene	1	ND
1,4-Dichlorobenzene	1	ND
Ethylbenzene	1	ND
Toluene	1	TBQ ²
Xylenes	1	ND
MTBE	10	ND

Bromobenzene Surrogate Recovery: 95%

NUMBER OF UNIDENTIFIED PEAKS FOUND: 1

NOTES:

- 1 None detected
- 2 Trace below quantitation limit

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CHAIN-OF-CUSTODY RECORD

007257

Project Name: VPS RUTLAND Site Location: RUTLAND	Reporting Address: GRIFFIN	Billing Address: GRIFFIN
Endyne Project Number: 45-1145	Company: Contact Name/Phone #:	Sampler Name: Becca Schuyler Phone #: 278-7708

[illegible]

Relinquished by: Signature <i>E. [Signature]</i>	Received by: Signature <i>M. Chambers</i>	Date/Time <i>8/18/93</i>	<i>4435</i>
Relinquished by: Signature	Received by: Signature	Date/Time	

Requested Analyses

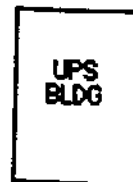
[illegible]

APPENDIX F.

Drilling Log

PROJECT UPS RUTLANDLOCATION RUTLAND, VT. PARK ST.DATE DRILLED 8/12/93 TOTAL DEPTH OF HOLE 12'DIAMETER 4.25"SCREEN DIA. 2" LENGTH 10' SLOT SIZE 0.010"CASING DIA. 2" LENGTH 2' TYPE SCH 40 PVCDRILLING CO. TDS DRILLING METHOD H.S.A.DRILLER MARK ZORK LOG BY RON MILLERWELL NUMBER MW-10

Sketch Map



NORTH

PARKING LOT

0 MW 10

DEPTH IN FEET	WELL CONSTRUCTION	NOTES	BLOWS PER 6" OF SPOON & PID READINGS	DESCRIPTION / SOIL CLASSIFICATION (COLOR, TEXTURE, STRUCTURES)
0		ROAD BOX	0-2 FEET 12-11-12-11 7.2 ppm	0-6" Cobbles, Dry, No Odor 6"-2' Brown Coarse-Fine Sand & Gravel Dry, No Odor
1		WELL CAP		
2		CONCRETE	4-6 FEET 7-6-6-6 2.0 ppm	Brown Silt & Very Fine Sand Wet, No Odor
3		BENTONITE		
4		WELL RISER		
5				
6			9-11 FEET 2-2-7-1 22 ppm	Brown Silt & Clay, Wet, Slight Odor
7				
8		GRAVEL PACK		
9				
10		WELL SCREEN	BASE OF EXPLORATION 12'	
11				
12		BOTTOM PLUG		
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				

Griffin International
ref: paint don #4